

REMARKS

This Preliminary Amendment is being filed with a Request for Continued Examination (RCE) of Application Serial No. 09/255,549. Upon entry of the Preliminary Amendment, Claims 1, 3, 5, 8, and 11 will be amended and Claims 1-14 will be pending. The above amendments and following remarks are responsive to the points raised in the final Office Action mailed November 19, 2003. No new matter has been introduced. Entry of this Preliminary Amendment and continued examination on the merits is respectfully requested.

Response to the Rejection Under 35 U.S.C. § 103(a)

Claims 1-14 have been rejected under 35 U.S.C. § 103(a) as being obvious over Oshima et al. ((Oshima) US Patent 5,526,045) in view of Hwang (US Patent 6,122,004). Applicant traverse this rejection.

Independent Claim 1 has been amended to recite an image sensing method including, inter alia:

“an adding step of adding first pixel data in the read image signal to second pixel data neighboring said first pixel data in the delayed image signal, delayed in said delaying step, in accordance with a predetermined addition ratio based on the calculating result of said calculating step in a moving image recording mode.”

The above amendments to independent Claims 3, 5, 8, and 11 are consistent with the amendments introduced in Claim 1. Support for the above amendments may be found in the detailed written description of, at least, Figure 5 and, in particular, the paragraph bridging Pages 13 and 14, as well as Figure 5 of the drawings. Neither Oshima nor Hwang, either alone or in combination, teach, suggest, or render obvious the invention as recited in independent Claims 1, 3, 5, 8, and 11.

Oshima discloses an electronically vibration correction method. According to the method, signal transferring of an image sensing device is divided into a high-velocity transfer mode and a normal transfer mode, and the number of pixels transferred in the high-velocity transfer mode is controlled. Oshima also states that the electronic method particularly provides an advantage of apparatus size reduction. As disclosed by Oshima, however, a resolving power in anti-vibration is two pixel pitch and Oshima is silent as to performing a fine pixel shifting, which accompanies a correction calculation for an amount less than one pixel unit so as to eliminate a resolution of unevenness.

The secondary teaching of Hwang, discloses an image stabilizing circuit for electronically vibration correction. As disclosed by Hwang, an inputted frame image is shifted on the basis of the hand trembling during a motion compensation process, and the shifted image comprises a shifted portion of the inputted image and a remaining portion with no image. Thereafter, the remaining portion is produced using previous frame data stored in a buffer.

An adding step, as recited in Claims 1, 3, 5, 8, and 11, adds first pixel data in the read image signal to second pixel data neighboring said first pixel data in the delayed image signal. That is, both image signals are obtained by moving the same frame image. As noted above with respect to Oshima, Hwang is likewise silent as to performing a fine pixel shifting, which accompanies a correction calculation for an amount less than one pixel unit so as to eliminate the resolution unevenness. As such, Hwang includes no secondary teaching or suggestion that would motivate one of ordinary skill in the art to modify Oshima, as suggested by the Examiner, and arrive at the subject matter recited in Applicants' claims.

Furthermore, the invention recited in the instant application is characterized in that it is determined whether the addition step is performed or prohibited on the basis of a kind of image recording mode. In other words, the fine pixel-shifting operation is performed when sensing a moving image. As a result, an image where connections between image fields are smooth is obtained. Meanwhile, in a case of sensing a still image, since the fine pixel-shifting is not performed, it is possible to obtain an image where resolution is not greatly deteriorated.

In view of the above discussion, the subject matter recited in Claims 1, 3, 5, 8, and 11 is distinguished over the prior art references of Oshima and Hwang, either alone or in combination. The subject matter of dependent Claims 2, 4, 6, 7, 9, 10, and 12-14 is likewise distinguished over the teachings of Oshima and Hwang, either alone or in combination, for at least the same reasons as their respective independent Claims 1, 3, 5, 8, and 11. Accordingly, the rejection of Claims 1-14 under 35 U.S.C. § 103(a) over Oshima in view of Hwang should be withdrawn and Claims 1-14 allowed.

CONCLUSION

Applicant respectfully submits that Claims 1-14 are in condition for allowance and a notice to that effect is earnestly solicited.

AUTHORIZATIONS

The Commissioner is hereby authorized to charge any additional fees which may be required for filing this application, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1232-4511. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Respectfully submitted,

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